

Date: Monday, 02/03/2009 11:25:12 AM  
User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
Job Number : 46181 *+2*  
Estimate Number : 12576  
P.O. Number :  
This Issue : 02/03/2009 S.O. No. :  
Prsht Rev. : NC  
First Issue : / / Type : LARGE FAB ASSY  
Previous Run : 44490

Drawing Name : STEP WELDMENT

Part Number : D3562041  
Drawing Number : D3562 REV E  
Project Number : N/A  
Drawing Revision : E  
Material :  
Due Date : 27/03/2009

Qty: *5* Um: Each

Written By :  
Checked & Approved By : *JLD 09.03.02*  
Comment :

Est Rev:A New Issue 06-11-09 JLM  
Est rev B ECN 987 07.10.09 EC verified by: DD  
Est Rev:C ECN1048 07-12-18 DD verified by:ec  
Est Rev:D 08-07-28 add chemical conversion coat DD  
verified by:EC  
Est Rev:E 09-02-27 (seq13) QC9 to QC10 DD verified by:EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D2622120C Step Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)  
Qty Part # Description Batch:  
1 D2622-120C Extrusion *B44064*

Check Material for any Dents or Defects

*SAD 09-03-05* *(5)*

2.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622 extrusion as per Dwg D3562

2-Deburr and bevel ends for welding

*SAD 09-03-05* *(5)*

3.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*SAD 09-03-05* *(5)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Part Number: D3562041

Job Number:



Seq. #:

Machine Or Operation:

Description:

4.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

6.0

D3560041

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

ARM WELDMENT

Batch: 844471=3 341067=2

7.0

D3560043

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

ARM WELDMENT

Batch: 844473=4 341068=1

8.0

MS20600AD4W5

Blind Rivet



Comment: Qty.: 32.0000 Each(s)/Unit Total: 128.0000 Each(s)

Blind Rivet

Batch: m110523=128 1110523

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Transfer drill Rivet holes as per dwg D3562.

2-Touch-up rivet holes with alodine as per dwg d3562

3-Rivet legs using Magnabond as per dwg D3562.

\*\*\*\*\*Ensure to wipe off any excess magnabond\*\*\*\*\*

A/R Magnabond 6398

Batch: m109900  
m108966



W/O:		WORK ORDER CHANGES					
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/03/16 (5) LH

11.0

D2734

Step End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total: 8.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D2734

End Cap

343535

FL 09-03-17 5

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld end caps as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.

A/R

Aluminum Rod

M108037

M110431

2-Grind end cap welds flush as per Dwg D3562

SAP 09-03-17 5

FL 09-03-17 5

13.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

PD 09-03-17 (5)

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/03/17 (5) LH

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

FL 09/03/18

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

11:25

OVEN TEMPERATURE:

320°

FINISH TIME:

11:55

FL 09/03/18 (5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3562 and QSI 005 4.4

Batch: M110454

09-03-18

(VS)

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Sorlosie

(XS)

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Assembly Kit

G-A

09/03/19

(3)

20.0

QC21

FINAL INSPECTION W/O RELEASE



Comment: FINAL INSPECTION W/O RELEASE

09/03/19

h 09.03.19

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



D3562-1,  
MAKE FROM  
EXTRUSION D2622

2  
APPLY BLACK  
ANTI-SKID ON  
TOP SURFACE  
TO BOTTOM  
OF TOP RADIUS

D3560-043 ARM WELDMENT

D3560-041 ARM WELDMENT

TRANSFER DRILL #30  
DEBURR & TOUCH UP HOLES  
WITH CHEMICAL CONVERSION  
COAT BEFORE RIVETING  
(32 PLACES PER STEP)

D3560-042 ARM WELDMENT

D3560-044 ARM WELDMENT

D3562-1,  
MAKE FROM  
EXTRUSION D2622

2  
APPLY BLACK  
ANTI-SKID ON  
TOP SURFACE  
TO BOTTOM  
OF TOP RADIUS

REFER TO STEP  
END DETAIL

INSTALL MS20600AD4W5 RIVET  
(32 PLACES PER STEP)

MEASURED BEFORE END CAPS WELDED IN PLACE

FWD

MEASURED BEFORE END CAPS WELDED IN PLACE

FWD

ROUND CORNER OF EXTRUSION TO  
MATCH BEND RADIUS OF END PLATE

NOTE: ALL WELDS SHALL BE 100%  
VISUALLY INSPECTED BY A  
QUALIFIED INSPECTOR PER  
DART QSI 004

D2734 END PLATE  
(TYP 2 PLACES)

TYPICAL STEP END DETAIL  
SCALE 1:2

### D3562-041 LH STEP ASSEMBLY

### D3562-042 RH STEP ASSEMBLY

#### NOTES:

- 1) MATERIAL: N/A
- 2) FINISH:

i) CHEMICAL CONVERSION COAT STEP EXTRUSION  
PER DART QSI 005 4.1 BEFORE ASSEMBLY

ii) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR  
GREY SANDTEX (4.3.5.6) OR  
BLACK SANDTEX (4.3.5.7) OR  
GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 8.79 lbs

8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398 BETWEEN  
THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH  
MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE POWDER COATING.

9) WELDING: PER DART QSI 004

QTY -041	QTY -042	P/N	DESCRIPTION
X		D3562-041	LH STEP ASSEMBLY
	X	D3562-042	RH STEP ASSEMBLY
1		D3560-041	ARM WELDMENT
1	1	D3560-042	ARM WELDMENT
1		D3560-043	ARM WELDMENT
1	1	D3560-044	ARM WELDMENT
32	32	MS20600AD4W5	RIVET
2	2	D2734	END PLATE

E	ADD QTY (2) TO D2734 END PLATE ON D3562-042	PH	08.01.11
D	REMOVE D2808 SPACER NOTE: REDRAWN IN SOLIDWORKS	DC	07.11.15
C	NOW MAGNOBOND, ADD D2808, REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.01.11		

DART AEROSPACE LTD

HAWKESBURY, ONTARIO, CANADA

DRAWING NO.  
D3562

REV. E  
SHEET 1 OF 1

TITLE  
STEP ASSEMBLY

SCALE  
1:5

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